



PTO/SB/08A (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, persons are required to respond to a collection of information unless it contains a valid OMB control number.

<b>Substitute for form 1449A/PTO</b> <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	1	of	11	Attorney Docket Number	32087/1010

U.S. PATENT DOCUMENTS					
Examiner Initials <sup>1</sup>	Cite No. <sup>2</sup>	U.S. Patent Document Number - Kind Code <sup>3</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/OC/	1.	US-2002/0119180 A1	08-29-2002	YELICK et al.	
	2.	US-2002/0137812 A1	09-26-2002	CHOW et al.	
	3.	US-2003/0031696 A1	02-13-2003	BAUM et al.	
	4.	US-4,137,921	02-06-1979	OKUZUMI et al.	
	5.	US-4,166,800	09-04-1979	FONG	
	6.	US-4,181,983	01-08-1980	KULKARNI	
	7.	US-4,243,775	01-06-1981	ROSENSAFT et al.	
	8.	US-4,279,249	07-21-1981	VERT et al.	
	9.	US-4,300,565	11-17-1981	ROSENSAFT et al.	
	10.	US-4,347,234	08-31-1982	WAHLIG et al.	
	11.	US-4,384,975	05-24-1983	FONG	
	12.	US-4,390,519	06-28-1983	SAWYER	
	13.	US-4,394,370	07-19-1983	JEFFERIES	
	14.	US-4,409,332	10-11-1983	JEFFERIES et al.	
	15.	US-4,530,449	07-23-1985	NOZAWA et al.	
	16.	US-4,538,603	09-03-1985	PAWELCHAK et al.	
	17.	US-4,539,981	09-10-1985	TUNC	
	18.	US-4,563,489	01-07-1986	URIST	
	19.	US-4,568,559	02-04-1986	NUWAYSER et al.	
	20.	US-4,578,384	03-25-1986	HOLLINGER	
	21.	US-4,585,797	04-29-1986	CIOCA	
	22.	US-4,596,574	06-24-1986	URIST	
	23.	US-4,623,588	11-18-1986	NUWAYSER et al.	
	24.	US-4,703,108	10-27-1987	SILVER et al.	
	25.	US-4,741,337	05-03-1988	SMITH et al.	
	26.	US-4,744,365	05-17-1988	KAPLAN et al.	
	27.	US-4,795,804	01-03-1989	URIST	
	28.	US-4,818,542	04-04-1989	DELUCA et al.	
	29.	US-4,837,285	06-06-1989	BERG et al.	
	30.	US-4,839,130	06-13-1989	KAPLAN et al.	
	31.	US-4,844,854	07-04-1989	KAPLAN et al.	
	32.	US-4,877,864	10-31-1989	WANG et al.	
	33.	US-4,889,119	12-26-1989	JAMIOLKOWSKI et al.	
	34.	US-4,898,186	02-06-1990	IKADA et al.	
	35.	US-4,898,734	02-06-1990	MATHIOWITZ et al.	
	36.	US-4,916,193	04-10-1990	TANG et al.	
	37.	US-4,938,763	07-03-1990	DUNN et al.	
	38.	US-4,961,707	10-09-1990	MAGNUSSON et al.	
	39.	US-4,968,590	11-06-1990	KUBERASAMPATH et al.	

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at 222.uspto.gov or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

10602598.1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	2	of	11	Attorney Docket Number	32087/1010

U.S. PATENT DOCUMENTS					
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	U.S. Patent Document Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/OC/	40.	US-4,975,527	12-04-1990	KOEZUKA et al.	
	41.	US-5,004,602	04-02-1991	HUTCHINSON	
	42.	US-5,007,939	04-16-1991	DELCOMMUNE et al.	
	43.	US-5,011,691	04-30-1991	OPPERMANN et al.	
	44.	US-5,011,692	04-30-1991	FUJIOKA et al.	
	45.	US-5,013,649	05-07-1991	WANG et al.	
	46.	US-5,037,639	08-06-1991	TUNG	
	47.	US-5,051,272	09-24-1991	HERMES et al.	
	48.	US-5,077,049	12-31-1991	DUNN et al.	
	49.	US-5,080,665	01-14-1992	JARRETT et al.	
	50.	US-5,081,106	01-14-1992	BENTLEY et al.	
	51.	US-5,084,051	01-28-1992	TORMALA et al.	
	52.	US-5,106,748	04-21-1992	WOZNEY et al.	
	53.	US-5,108,753	04-28-1992	KUBERASAMPATH et al.	
	54.	US-5,108,755	04-28-1992	DANIELS et al.	
	55.	US-5,116,738	05-26-1992	WANG et al.	
	56.	US-5,128,136	07-07-1992	BENTLEY et al.	
	57.	US-5,133,755	07-28-1992	BREKKE	
	58.	US-5,141,905	08-25-1992	ROSEN et al.	
	59.	US-5,143,730	09-01-1992	FUES et al.	
	60.	US-5,149,691	09-22-1992	RUTHERFORD	
	61.	US-5,162,430	11-10-1992	RHEE et al.	
	62.	US-5,166,058	11-24-1992	WANG et al.	
	63.	US-5,171,217	12-15-1992	MARCH et al.	
	64.	US-5,185,152	02-09-1993	PEYMAN	
	65.	US-5,187,076	02-16-1993	WOZNEY et al.	
	66.	US-5,192,741	03-09-1993	ORSOLINI et al.	
	67.	US-5,197,977	03-30-1993	HOFFMAN, JR. et al.	
	68.	US-5,206,028	04-27-1993	LI	
	69.	US-5,227,157	07-13-1993	MCGINITY et al.	
	70.	US-5,231,169	07-27-1993	CONSTANTZ et al.	
	71.	US-5,250,584	10-05-1993	IKADA et al.	
	72.	US-5,268,167	12-07-1993	TUNG	
	73.	US-5,268,178	12-07-1993	CALHOUN et al.	
	74.	US-5,271,961	12-21-1993	MATHIOWITZ et al.	
	75.	US-5,278,201	01-11-1994	DUNN et al.	
	76.	US-5,278,202	01-11-1994	DUNN et al.	
	77.	US-5,281,419	01-25-1994	TUAN et al.	
	78.	US-5,288,496	02-22-1994	LEWIS	

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at 222.uspto.gov or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	3	of	11	Attorney Docket Number	32087/1010

## U.S. PATENT DOCUMENTS

Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	U.S. Patent Document Number - Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
/OC/	79.	US-5,308,623	05-03-1994	FUES et al.	
	80.	US-5,320,624	06-14-1994	KAPLAN et al.	
	81.	US-5,324,307	06-28-1994	JARRETT et al.	
	82.	US-5,324,519	06-28-1994	DUNN et al.	
	83.	US-5,324,520	06-28-1994	DUNN et al.	
	84.	US-5,350,580	09-27-1994	MUCHOW et al.	
	85.	US-5,360,610	11-01-1994	TICE et al.	
	86.	US-5,366,508	11-22-1994	BREKKE	
	87.	US-5,366,733	11-22-1994	BRIZZOLARA et al.	
	88.	US-5,366,734	11-22-1994	HUTCHINSON	
	89.	US-5,376,636	12-27-1994	RUTHERFORD et al.	
	90.	US-5,437,857	08-01-1995	TUNG	
	91.	US-5,460,803	10-24-1995	TUNG	
	92.	US-5,534,244	07-09-1996	TUNG	
	93.	US-5,562,895	10-08-1996	TUNG	
	94.	US-5,833,954	11-10-1998	CHOW et al.	
	95.	US-5,993,786	11-30-1999	CHOW et al.	
	96.	US-6,000,341	12-14-1999	TUNG	
	97.	US-6,001,897	12-14-1999	DICKENS	
	98.	US-6,056,930	05-02-2000	TUNG	
	99.	US-6,114,408	09-05-2000	DICKENS	
	100.	US-6,187,838	02-13-2001	DICKENS	
	101.	US-6,206,959	03-27-2001	DICKENS	
	102.	US-6,210,759	04-03-2001	DICKENS	
	103.	US-6,281,256	08-28-2001	HARRIS et al.	
	104.	US-6,398,859	06-04-2002	DICKENS et al.	
	105.	US-6,413,498	07-02-2002	MALMAGRO	
	106.	US-6,472,210	10-29-2002	HOLY et al.	
/OC/	107.	US-6,793,725	09-21-2004	CHOW et al.	

## FOREIGN PATENT DOCUMENTS

Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	7 <sup>6</sup>
/OC/	108.	WO 00/56375 A2	09-28-2000	MURPHY et al.		
/OC/	109.	WO 02/07679 A2	01-31-2002	SHI et al.		

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at 222.uspto.gov or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

10602598.1

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	4	of	11	Attorney Docket Number	32087/1010

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>2</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume:issue number(s), publisher, city and/or country where published.	TI
/OC/	110.	ALLCOCK et al., "Poly[(amino acid ester)phosphazenes] As Substrates for the Controlled Release of Small Molecules," <i>Biomater.</i> 15(8):563-9 (1994) (Abstract only)	
	111.	ALSBERG et al., "Engineering Growing Tissues," <i>Proc. Nat'l Acad. Sci. U.S.A.</i> 99(19):12025-30 (2002)	
	112.	AMIJI & PARK, "Surface modification of polymeric biomaterials with poly(ethylene oxide), albumin, and heparin for reduced thrombogenicity," <i>J. Biomater. Sci. Polym. Ed.</i> 4(3):217-34 (1993) (Abstract only)	
	113.	ANSELME et al., Inhibition of calcification in vivo by acyl azide cross-linking of a collagen-glycosaminoglycan sponge. <i>Matrix</i> 12(4):264-73 (1992) (Abstract only)	
	114.	ATALA et al., Endoscopic treatment of vesicoureteral reflux with a chondrocyte-alginate suspension. <i>J. Urol.</i> 152(2 Pt 2):641-3; (1994) (Abstract only)	
	115.	ATALA et al., "Injectable alginate seeded with chondrocytes as a potential treatment for vesicoureteral reflux," <i>J. Urol.</i> 150(2 Pt 2):745-7 (1993) (Abstract only)	
	116.	BELL et al., "Living tissue formed in vitro and accepted as skin-equivalent tissue of full thickness," <i>Science</i> 211(4486):1052-4 (1981) (Abstract only)	
	117.	BLAIR et al., "Clinical trial of calcium alginate haemostatic swabs," <i>Br. J. Surg.</i> 77(5):568-70 (1990) (Abstract only)	
	118.	CAVALLARO et al., "The nucleotide sequence of a complementary DNA encoding <i>Flavobacterium bidentis</i> carbonic anhydrase," <i>FEBS Lett.</i> 350(2-3):216-8 (1994) (Abstract only)	
	119.	CLARKSON "Sponge implants for flat breasts," <i>Proc. R. Soc. Med.</i> , 53:880-1 (1960)	
	120.	COMPTON et al., "Skin regenerated from cultured epithelial autografts on full-thickness burn wounds from 6 days to 5 years after grafting. A light, electron microscopic and immunohistochemical study," <i>Lab. Invest.</i> , 60(5):600-12 (1989) (Abstract only)	
	121.	DANIELS et al., "Evaluation of absorbable poly(ortho esters) for use in surgical implants," <i>J. Appl. Biomater.</i> , 5(1):51-64 (1994) (Abstract only)	
	122.	DELUSTRO et al., "Immune responses to allogeneic and xenogeneic implants of collagen and collagen derivatives," <i>Clin. Orthop. Relat. Res.</i> , (260):263-79 (1990) (Abstract only)	
/OC/	123.	DEXIT, "Development of a bioartificial liver using isolated hepatocytes," <i>Artif. Organs</i> , 18(5):371-84 (1994) (Abstract only)	

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/1*TO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	5	of	11	Attorney Docket Number	32087/1010

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/OC/	124.	DUCHEYNE & HEALY, "The effect of plasma-sprayed calcium phosphate ceramic coatings on the metal ion release from porous titanium and cobalt-chromium alloys," <i>J. Biomed. Mater. Res.</i> , 22(12):1137-63 (1988) (Abstract only)	
	125.	DULCEY et al., "Deep UV photochemistry of chemisorbed monolayers: patterned coplanar molecular assemblies," <i>Science</i> , 252(5005):551-4 (1991) (Abstract only)	
	126.	EMBLETON & TIGHE, "Polymers for biodegradable medical devices. X. Microencapsulation studies: control of poly-hydroxybutyrate-hydroxyvalerate microcapsules porosity via polycaprolactone blending," <i>J. Microencapsul.</i> , 10(3):341-52 (1993) (Abstract only)	
	127.	EMERICH et al., "A novel approach to neural transplantation in Parkinson's disease: use of polymer-encapsulated cell therapy," <i>Neurosci. Biobehav. Rev.</i> , 16(4):437-47 (1992) (Abstract only)	
	128.	ENGELBERG & KOHN, "Physico-mechanical properties of degradable polymers used in medical applications: a comparative study," <i>Biomaterials</i> , 12(3):292-304 (1991) (Abstract only)	
	129.	FRAZZA & SCHMITT, "A new absorbable suture," <i>J. Biomed. Mater. Res.</i> , 5(2):43-58 (1971) (Abstract only)	
	130.	GIUNCHEDI et al., "Cellulose acetate butyrate and polycaprolactone for ketoprofen spray-dried microsphere preparation," <i>J. Microencapsul.</i> , 11(4):381-93 (1994) (Abstract only)	
	131.	GOLDBERG et al., "Cloning and expression of a collagen-analog-encoding synthetic gene in <i>Escherichia coli</i> ," <i>Gene</i> , 80(2):305-14 (1989) (Abstract only)	
	132.	GOMBOTZ & PETTIT, "Biodegradable polymers for protein and peptide drug delivery," <i>Bioconj. Chem.</i> , 6(4):332-51 (1995) (Abstract only)	
	133.	GREEN et al., "Growth of cultured human epidermal cells into multiple epithelia suitable for grafting," <i>Proc. Natl. Acad. Sci. U S A</i> , 76(11):5665-8 (1979)	
	134.	GUÉNARD et al., "Syngeneic Schwann Cells Derived from Adult Nerves Seeded in Semipermeable Guidance Channels Enhance Peripheral Nerve Regeneration," <i>J. Neurosci.</i> , 12(9):3310-20 (1992)	
	135.	HANSBROUGH et al., "Evaluation of a biodegradable matrix containing cultured human fibroblasts as a dermal replacement beneath meshed skin grafts on athymic mice," <i>Surgery</i> , 111(4):438-46 (1992) (Abstract only)	
/OC/	136.	HARRIS et al., Open pore biodegradable matrices formed with gas foaming. <i>J. Biomed. Mat. Res.</i> 42(3):396-402 (1998) (Abstract only)	

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	6	of	11	Attorney Docket Number	32087/1010

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/OC/	137.	HEIMBACH et al., "Artificial Dermis for Major Burns," <i>Ann. Surg.</i> 208(3):313-19 (1988)	
	138.	HELLER, "Controlled drug release from poly(ortho esters)," <i>Ann. N.Y. Acad. Sci.</i> , 446:51-66 (1985)	
	139.	HILL-WEST et al., "Efficacy of a resorbable hydrogel barrier, oxidized regenerated cellulose, and hyaluronic acid in the prevention of ovarian adhesions in a rabbit model," <i>Fertil. Steril.</i> , 62(3):630-4 (1994) (Abstract only)	
	140.	HYNES et al., "Selective Expression of an Endogenous Lactose-Binding Lectin Gene in Subsets of Central and Peripheral Neurons," <i>J. Neurosci.</i> 10(3):1004-13 (1990)	
	141.	JARCHO, "Calcium phosphate ceramics as hard tissue prosthetics," <i>Clin. Orthop. Relat. Res.</i> , (157):259-78 (1981)	
	142.	KALLEN et al., "Effect of encephalitogenic protein on migration in agarose of leukocytes from patients with multiple sclerosis. Variable effect of the antigen in a large dose range, with a literature review," <i>Acta. Neurol. Scand.</i> , 55(1):33-46 (1977) (Abstract only)	
	143.	KAPLAN & MASON, JR., "Antimicrobial agents: resistance patterns of common pathogens," <i>Pediatr. Infect. Dis. J.</i> , 13(11):1050-3 (1994)	
	144.	KASAI et al., "Is the biological artificial liver clinically applicable? A historic review of biological artificial liver support systems," <i>Artif. Organs</i> , 18(5):348-54 (1994) (Abstract only)	
	145.	KATZ & TURNER, "Evaluation of tensile and absorption properties of polyglycolic acid sutures," <i>Surg. Gynecol. Obstet.</i> , 131(4):701-16 (1970)	
	146.	KOIDE et al., "A new type of biomaterial for artificial skin: dehydrothermally cross-linked composites of fibrillar and denatured collagens," <i>J. Biomed. Mater. Res.</i> , 27(1):79-87 (1993) (Abstract only)	
	147.	KUNG et al., "Surface modifications of alginate/poly(L-lysine) microcapsular membranes with poly(ethylene glycol) and poly(vinyl alcohol)," <i>Biomaterials</i> , 16(8):649-55 (1995) (Abstract only)	
	148.	LANGER & VACANTI, "Tissue engineering," <i>Science</i> , 260(5110):920-6 (1993) (Abstract only)	
✓	149.	LAURENCIN & LANGER, "Polymeric controlled release systems: new methods for drug delivery," <i>Clin. Lab. Med.</i> , 7(2):301-23 (1987) (Abstract only)	
/OC/	150.	LAURENCIN et al., "Use of polyphosphazenes for skeletal tissue regeneration," <i>J. Biomed. Mater. Res.</i> , 27(7):963-73 (1993) (Abstract only)	

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	7	of	11	Attorney Docket Number	32087/1010

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
/OC/	151.	LEENSLAG et al., Resorbable materials of poly(L-lactide). VII. In vivo and in vitro degradation. <i>Biomaterials</i> , 8(4):311-4 (1987) (Abstract only)		
	152.	LEMONS et al., "Significance of the porosity and physical chemistry of calcium phosphate ceramics/Orthopedic Uses," <i>Ann. N.Y. Acad. Sci.</i> , 523:278-82 (1988)		
	153.	LENTZ, "Polymer-induced membrane fusion: potential mechanism and relation to cell fusion events," <i>Chem. Phys. Lipids</i> , 73(1-2):91-106 (1994) (Abstract only)		
	154.	LÉVESQUE et al., "Maintenance of Long-Term Secretory Function by Microencapsulated Islets of Langerhans," <i>Endocrinol.</i> 130(2):644-50 (1992)		
	155.	LIM & SUN, "Microencapsulated islets as bioartificial endocrine pancreas," <i>Science</i> , 210(4472):908-10 (1980) (Abstract only)		
	156.	LOM et al., "A versatile technique for patterning biomolecules onto glass coverslips," <i>J. Neurosci. Methods</i> , 50(3):385-97 (1993) (Abstract only)		
	157.	LOPEZ et al., "An improved Bradford protein assay for collagen proteins," <i>Clin. Chim. Acta.</i> , 220(1):91-100 (1993) (Abstract only)		
	158.	LORA et al., "Biocompatible polyphosphazenes by radiation-induced graft copolymerization and heparinization," <i>Biomaterials</i> , 12(3):275-80 (1991) (Abstract only)		
	159.	MASSIA & HUBBELL, "Human endothelial cell interactions with surface-coupled adhesion peptides on a nonadhesive glass substrate and two polymeric biomaterials," <i>J. Biomed. Mater. Res.</i> , 25(2):223-42 (1991) (Abstract only)		
	160.	MATSUDA & MOGHADDAM, "Development of thermosensitive peptidyl cell substrate synthesis and artificial fibrin glue," <i>ASAIO Trans.</i> , 37(3):M196-7 (1991) (Abstract only)		
	161.	MCGRATH & CHUA, "The autumn greening of Cold Spring Harbor," <i>New Biol.</i> , 1992. 4(2):107-14		
	162.	MIKOS et al., "Preparation and Characterization of Poly(L-Lactic Acid) Foams," <i>Polymer</i> 35(5):1068-77 (1994) (Abstract only)		
	163.	MIKOS et al., "Preparation of poly(glycolic acid) bonded fiber structures for cell attachment and transplantation," <i>J. Biomed. Mater. Res.</i> , 27(2):183-9 (1993) (Abstract only)		
↓	164.	MOONEY et al., "Cytoskeletal Filament Assembly and the Control of Cell Spreading and Function by Extracellular Matrix," <i>J. Cell Sci.</i> 108(Pt 6):2311-20 (1995)		
/OC/	165.	MOONEY et al., "Extracellular Matrix Controls Tubulin Monomer Levels in Hepatocytes by Regulating Protein Turnover," <i>Mol. Biol. Cell</i> 5(12):1281-8 (1994)		

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO		<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)		Application Number	10/684,226
		Filing Date	October 10, 2003
		First Named Inventor	RUTHERFORD
		Art Unit	3732
		Examiner Name	Cary E. O'Connor
Sheet 8 of 11	Attorney Docket Number	32087/1010	

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>2</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>3</sup>
/OC/	166.	MOONEY et al., "Switching from differentiation to growth in hepatocytes: control by extracellular matrix," <i>J. Cell Physiol.</i> , 151(3):497-505 (1992) (Abstract only)	
	167.	MOONEY et al., "Biodegradable sponges for hepatocyte transplantation," <i>J. Biomed. Mater. Res.</i> , 29(8):959-65 (1995) (Abstract only)	
	168.	MOONEY et al., "Design and fabrication of biodegradable polymer devices to engineer tubular tissues," <i>Cell Transplant.</i> , 3(2):203-10 (1994) (Abstract only)	
	169.	MOONEY et al., "Engineering dental pulp-like tissue in vitro," <i>Biotechnol. Prog.</i> , 12(6):865-8 (1996) (Abstract only)	
	170.	MOONEY et al., "Novel approach to fabricate porous sponges of poly(D,L-lactic-co-glycolic acid) without the use of organic solvents," <i>Biomaterials</i> , 17(14):1417-22 (1996) (Abstract only)	
	171.	MORIKAWA et al., "Enhancement of therapeutic effects of recombinant interleukin 2 on a transplantable rat fibrosarcoma by the use of a sustained release vehicle, pluronic gel," <i>Cancer Res.</i> , 47(1):37-41 (1987)	
	172.	MURPHY & MOONEY, "Bioinspired growth of crystalline carbonate apatite on biodegradable polymer substrata," <i>JACS</i> 124:1910-7 (2002) (Abstract only)	
	173.	NAKASHIMA, "Induction of Dentine in Amputated Pulp of Dogs by Recombinant Human Bone Morphogenetic Proteins-2 and -4 with Collagen Matrix," <i>Arch. Or. Biol.</i> 39(12):1085-89 (1994) (Abstract only)	
	174.	NAKASHIMA, "Induction of dentin formation on canine amputated pulp by recombinant human bone morphogenetic proteins (BMP)-2 and -4," <i>J. Dent. Res.</i> 73:1515-1522 (1994) (Abstract only)	
	175.	O'SHEA et al., "Prolonged survival of transplanted islets of Langerhans encapsulated in a biocompatible membrane," <i>Biochim. Biophys. Acta</i> , 804(1):133-6 (1984) (Abstract only)	
	176.	PEPPAS & LANGER, "New challenges in biomaterials," <i>Science</i> , 263(5154):1715-20 (1994) (Abstract only)	
	177.	PIERSCHBACHER & RUOSLAHTI, "Cell attachment activity of fibronectin can be duplicated by small synthetic fragments of the molecule," <i>Nature</i> , 309(5963):30-3 (1984) (Abstract only)	
	178.	POLK et al., "Controlled release of albumin from chitosan-alginate microcapsules," <i>J. Pharm. Sci.</i> , 83(2):178-85 (1994) (Abstract only)	
/OC/	179.	PRIME & WHITESIDES, "Self-assembled organic monolayers: model systems for studying adsorption of proteins at surfaces," <i>Science</i> , 252(5010):1164-7 (1991) (Abstract only)	

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.



Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	9	of	11	Attorney Docket Number	32087/1010

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>	
/OC/	180.	RAZAVI et al., "Clinical applications of a polyphosphazene-based resilient denture liner," <i>J. Prosthodont.</i> , 2(4):224-7 (1993) (Abstract only)		
	181.	RUOSLAHTI & PIERSCHBACHER, "New perspectives in cell adhesion: RGD and integrins," <i>Science</i> , 238(4826):491-7 (1987) (Abstract only)		
	182.	RUTHERFORD & GU, "Treatment of inflamed ferret dental pulps with recombinant bone morphogenetic protein-7," <i>Eu J Or Sci</i> , 108(3):202-6 (2000) (Abstract only)		
	183.	RUTHERFORD, "BMP-7 gene transfer to inflamed ferret dental pulps," <i>Euro. J. Oral Science</i> , 109(6) 422-444 (2001) (Abstract only)		
	184.	RUTHERFORD, et al., "Induction of reparative dentine formation in monkeys by recombinant human osteogenic protein-1," <i>Arch. Oral Biol.</i> , 38(7):571-6 (1993) (Abstract only)		
	185.	RUTHERFORD et al., "Platelet-derived growth factor and dexamethasone combined with a collagen matrix induce regeneration of the periodontium in monkeys," <i>J. Clin. Periodontol.</i> , 20(7):537-44 (1993) (Abstract only)		
	186.	RUTHERFORD et al., "Synergistic effects of dexamethasone on platelet-derived growth factor mitogenesis in vitro," <i>Arch. Oral Biol.</i> , 37(2):139-45 (1992) (Abstract only)		
	187.	RUTHERFORD et al., "The time-course of the induction of reparative dentine formation in monkeys by recombinant human osteogenic protein-1," <i>Arch. Oral Biol.</i> , 39(10):833-8 (1994) (Abstract only)		
	188.	RUTHERFORD et al., "Use of bovine osteogenic protein to promote rapid osseointegration of endosseous dental implants," <i>Int. J. Oral Maxillofac. Implants</i> , 7(3): 297-301 (1992) (Abstract only)		
	189.	RUTHERFORD et al., "Transdental stimulation of reparative dentine formation by osteogenic protein-1 in monkeys," <i>Archs. Oral Biol.</i> 40: 681-683 (1995) (Abstract only)		
	190.	SAWHNEY et al., "Interfacial photopolymerization of poly(ethylene glycol)-based hydrogels upon alginate-poly(L-lysine) microcapsules for enhanced biocompatibility," <i>Biomaterials</i> , 14(13):1008-16 (1993) (Abstract only)		
	191.	SAWHNEY et al., "Optimization of photopolymerized bioerodible hydrogel properties for adhesion prevention," <i>J. Biomed. Mater. Res.</i> , 28(7):831-8 (1994) (Abstract only)		
↓	192.	SCHWARTZ & ERICH, "Experimental study of polyvinyl-formal (ivalon) sponge as a substitute for tissue," <i>Plast. Reconstr. Surg.</i> , 25:1-14 (1960)		
/OC/	193.	SERWER, "Agarose gel electrophoresis of bacteriophages and related particles," <i>J. Chromatogr.</i> , 418:345-57 (1987) (Abstract only)		

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO				<b>Complete if Known</b>	
<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> (use as many sheets as necessary)				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
Sheet	10	of	11	Attorney Docket Number	32087/1010

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
IOC/	194.	SINGHVI et al., Engineering cell shape and function. <i>Science</i> , 264(5159):696-8 (1994) (Abstract only)	
	195.	SLOAN et al., "Stimulation of the rat dentine-pulp complex by bone morphogenetic protein-7 in vitro," <i>Arch Or Biol</i> , 45:173-177 (2000) (Abstract only)	
	196.	SMIDSRD & SKJAK-BRAEK, "Alginate as immobilization matrix for cells," <i>Trends Biotechnol</i> , 8(3):71-8 (1990) (Abstract only)	
	197.	SOON-SHIONG et al., Insulin independence in a type 1 diabetic patient after encapsulated islet transplantation. <i>Lancet</i> , 343(8903):950-1 (1994) (Abstract only)	
	198.	STERN et al., "Histologic study of artificial skin used in the treatment of full-thickness thermal injury," <i>J. Burn Care Rehabil</i> , 11(1):7-13 (1990) (Abstract only)	
	199.	STOKER et al., "Designer microenvironments for the analysis of cell and tissue function," <i>Curr. Opin. Cell Biol</i> , 2(5):864-74 (1990)	
	200.	SUN et al., "Injectable microencapsulated islet cells as a bioartificial pancreas," <i>Appl. Biochem. Biotechnol</i> , 10:87-99 (1984) (Abstract only)	
	201.	URRY et al., "Mechanochemical Coupling in Synthetic Polypeptides by Modulation of an Inverse Temperature Transition," <i>Proc. Nat'l Acad. Sci. U.S.A.</i> 85(10):3407-11 (1988)	
	202.	URRY et al., "Molecular biophysics of elastin structure, function and pathology," <i>Ciba Found. Symp</i> , 192:4-22 (1995) (Abstract only)	
	203.	URRY et al., "A method for fixation of elastin demonstrated by stress/strain characterization," <i>Biochem. Biophys. Res. Commun.</i> , 151(2):686-92 (1988) (Abstract only)	
	204.	VACANTI et al., "Selective cell transplantation using bioabsorbable artificial polymers as matrices," <i>J. Pediatr. Surg</i> , 23(1 Pt 2):3-9 (1988)	
	205.	VAINIONPAA et al., "Strength and strength retention in vitro, of absorbable, self-reinforced polyglycolide (PGA) rods for fracture fixation," <i>Biomaterials</i> , 8(1):46-8 (1987) (Abstract only)	
	206.	WANG, "Implantable reservoir for supplemental insulin delivery on demand by external compression," <i>Biomaterials</i> , 10(3):197-201 (1989) (Abstract only)	
	207.	YANNAS et al., "Synthesis and Characterization of a Model Extracellular Matrix that Induces Partial Regeneration of Adult Mammalian Skin," <i>Proc. Nat'l Acad. Sci. U.S.A.</i> 86(3):933-7 (1989)	
IOC/	208.	YANNAS et al., "Prompt, long-term functional replacement of skin," <i>Trans. Am. Soc. Artif. Intern. Organs</i> , 27:19-23 (1981)	

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number.

Substitute for form 1449A/PTO <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				<b>Complete if Known</b>	
				Application Number	10/684,226
				Filing Date	October 10, 2003
				First Named Inventor	RUTHERFORD
				Art Unit	3732
				Examiner Name	Cary E. O'Connor
				Attorney Docket Number	32087/1010
Sheet	11	of	11		

OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS			
Examiner Initials <sup>1</sup>	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
/OCI/	209.	YOUNG et al., "Tissue Engineering of Complex Tooth Structures on Biodegradable Polymer Scaffolds," J. Dent. Res. 81(10):695-700 (2002)	

Examiner Signature	/Cary O'Connor/	Date Considered	09/05/2007
--------------------	-----------------	-----------------	------------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**  
( Not for submission under 37 CFR 1.99)

Application Number		10684226
Filing Date		2003-10-10
First Named Inventor	RUTHERFORD	
Art Unit	3732	
Examiner Name	Cary E. O'Connor	
Attorney Docket Number	32087/1010	

7.26.07

LED	1	GIUSTI et al., "New Biolized Polymers for Cardiovascular Applications," Life Support Syst. 3(Suppl 1):476-80 (1985).	<input type="checkbox"/>
LED	2	MERRILL, "Poly(Ethylene Oxide) Star Molecules: Synthesis, Characterization, and Applications in Medicine and Biology," J. Biomater. Sci. Polym. Ed. 5(1-2):1-11 (1993).	<input type="checkbox"/>
LED	3	RICORDI et al., "Renal Subcapsular Transplantation of Clusters of Hepatocytes in Conjunction with Pancreatic Islets," Transplantation 45(6):1148-51 (1988).	<input type="checkbox"/>
LED	4	SCHMOLKA, "Artificial Skin. I. Preparation and Properties of Pluronic F-127 Gels for Treatment of Burns," J. Biomed. Mater. Res. 6(6):571-82 (1972).	<input type="checkbox"/>
LED	5	VACANTI et al., "Tissue-engineered Growth of Bone and Cartilage," Transplantation Proc. 25(1):1019-21.(1993).	<input type="checkbox"/>

If you wish to add additional non-patent literature document citation information please click the Add button

**EXAMINER SIGNATURE**

Examiner Signature	<i>Cary E O'Connor</i>	Date Considered	9-5-07
--------------------	------------------------	-----------------	--------

\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through a citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

<sup>1</sup> See Kind Codes of USPTO Patent Documents at [www.USPTO.GOV](http://www.USPTO.GOV) or MPEP 901.04. <sup>2</sup> Enter office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>3</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>4</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>5</sup> Applicant is to place a check mark here if English language translation is attached.